

Promotion of Productive Uses of Rural Electrification in Indonesia

Jim Finucane

SHS Project Support Group, Indonesia

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prepared with information and assistance of PLN's Rural
Business Services team, especially Mr Marnoto and Mr
Basri Hasan

**Rural Business Services (RBS) is
a marketing activity of
Indonesia's national electricity
utility (PLN) to increase kWh
sales to rural businesses for
productive uses (PU)**

Background

- 1986 IBRD sector report identifies low productive use of RE as a problem
- 1989-93 Rural Electrification I project includes a pilot Small Business Services component
- 1994-98 Rural Electrification II project includes expanded Rural Business Services component

The Problem

Low productive uses

- reduces the financial viability of RE investments
 - low load factor
 - low revenue
- reduces the economic benefits of RE investments

Causes of Low Productive Uses which PLN can address

- Rural businesses have limited information about PU possibilities and competitiveness of PLN services
- Poor PLN service for initial connections and increased kVa, negotiated tariff classifications
- Service interruptions lead to captive power

Solutions

- Better PLN marketing
 - Better information to customers
 - Better customer service
 - Assistance to link customers with banks, equipment suppliers
- Better technical performance

Approach

- Use local NGOs as PLN's marketing outreach to rural businesses to provide information on PU possibilities and PLN services and to link with banks, suppliers
- Reorganize PLN internally to improve customer service and technical performance

Criteria for area selection

- Grid supplied
- Local NGO available
- Local support from PLN
- Low productive uses - high electrification ratio, low ratio of industry customers to households connected, high va connected and per capita kwh sales to households, secondary data indicates significant number of enterprises in area

Initial pilot - 1989-94

- Five NGOs promote PLN services to existing and potential entrepreneurs
- NGOs use community meetings, door to door surveys, demonstrations, cost comparisons of PLN vs manual and diesel alternatives, contacts with banks, suppliers
- PLN has central unit with international advisor to strengthen, guide local NGOs

Changes for 1995 -98

- Expand to 26 areas (26 local NGOs)
- Target better
 - existing businesses, not startups
 - larger as well as smaller businesses
 - changeovers (new connections, increase kVA)
- Operate better - standardize materials, centralize local NGO training, conduct 11 month campaigns, use two local advisers
- Mainstream - involve local PLN staff more

Results

- 1991 - 94
 - 15,800 entrepreneurs guided
 - 8,409 (53%) increase productive uses
- 1996 - 98
 - 42,339 enterprises guided
 - 33,143 (78%) increase productive uses
 - average monthly increase of 170 kWh

Key indicators

	firms	employment		delta
		<u>before</u>	<u>after</u>	kWh
SBS	8,409	2.48	3.28	
RBS	33,143	3.42	3.63	170

Source: PLN - RBS database

PLN cost benefit study conclusions

- Net benefit compensates the cost of the program incurred by PLN
 - Benefit cost ratio is 1.296
 - Payback period is 5.72 years
- Profits and employment of businesses increased compared with their “before RBS” status and compared with a control group of enterprises

Lessons

- PLN can increase productive uses by targeted marketing interventions which address information constraints of small enterprises
- Rural businesses have limited information on changeover options and costs and weak capacity to deal with PLN, banks
- Local NGO's can be viable rural marketing partners for PLN, but they require capacity building assistance themselves